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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,353	07/04/2002	Chang-Lin Pi	AVIP0018USA	9620

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EXAMINER

LEE, CHEUKFAN

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,353

Applicant(s)

PI, CHANG-LIN

Examiner

Cheukfan Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 July 2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-12 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 04 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1-12 are pending. Claim 1 is independent.

2. Claim 2 is objected to because of the following:

In claim 2, line 1, "drive" should be changed to – drives --.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugino et al. (Japanese Application Publication No. 5-14614 (JP 05-014614 A)). A machine translated English version of the publication is attached to the publication in Japanese language, which is attached to this Office Action.

Sugino discloses a scanner comprising a housing (inherent for the type of scanner of Sugino) having a front section (the left section of the scanner shown in Figs. 1 and 5), a rear section (the right section of the scanner in Figs. 1 and 5) and a document scanning section (the middle section of the scanner in Figs. 1 and 5 corresponding to where document 7 is placed) between the front section and the rear section, a transparent platform (6) installed inside the housing (inherent) for a document (7) to be placed on, a scanning module (1) installed inside the inherent housing for scanning the document (7), a motor (2) for driving the scanning module (1), and a front

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compensation element (magnet 4, or springs 17) installed at a front end (the left end) of the inherent housing for providing a force to push the scanning module (1) away from the front section (the left section) of the housing, wherein when the motor (2) drives the scanning module (1) to move backwards (in the x direction in Figs. 1 and 5) from the front end (the left end in Figs. 1 and 5) of the housing, the front compensation element (magnet 4, or springs 17s) provides the force to push the scanning module (1) while the scanning module (1) is in the front section (left section) so as to reduce an acceleration time of the scanning module (1) (English translation, Figs. 1 and 5, paragraphs 0006-0012, 0020, and 0021).

Regarding claim 2, though not disclosed in detail, it is inherent that the front compensation element (spring 17 in Fig. 5) provides a force to reduce a deceleration time of the scanning module (1) while the scanning module is in the front section, when the motor (2) drives the scanning module (1) to move forward toward the front end (left end of scanner in Fig. 5) of the (inherent) housing. That is because the position of the scanning module shown in Figs. 5 and 6 is "a position in readiness" (paragraph 0021), meaning that the motor (2) returns the scanning module (1) to the "position in readiness" from the right end of the scanner shown in Fig. 5 to the left end, a position/an end at which the spring (17) provides a force to reduce a deceleration time of the scanning module (1) upon compressing the spring (17) by the scanning module (1) returning from the right end.

Regarding claims 3 and 4, the front compensation element of Sugino is a spring (17 in Fig. 5).

Regarding claim 5, the front compensation element discussed for claim 1 is a first magnetic element (4). Sugino further discloses a second magnetic element (5 in Fig. 1) installed on the scanning module (1), a polarity of the first magnetic element (4) facing the same polarity of the second magnetic element (5) so that when the scanning module (1) is in the front section (the left section of the scanner shown in Fig. 1), the first magnetic element (4) and the second magnetic element repel each other (English translation, Fig. 1, paragraphs 0006-0012).

Regarding claim 6, although not shown in the figures nor explicitly disclosed in the specification, a sliding rod as claimed is inherent in the scanner (Fig. 5) of Sugino (paragraph 0021) because usually this type of scanners employ such a sliding rod(s) for the scanning module to move along when the module (1) is pulled by the motor (2) pulling the belt (3), providing stable support for the module. The inherent sliding rod is fixed between the front end (left end of the scanner in Fig. 5) and a rear end (the right end of the scanner in Fig. 5) of the inherent housing, the scanning module (1 in Fig. 5) sliding back and forth along the sliding rod inside the housing.

Regarding claim 8, the motor (2) is installed inside the (inherent) housing (Fig. 5).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugino et al. (Japanese Application Publication No. 5-14614 (JP 05-014614 A)) in view of Thaler (U.S. Patent No. 4,609,946). As mentioned above, a machine translated English version of the publication is attached to the publication in Japanese language, which is attached to this Office Action.

Regarding claim 7, the scanner of Sugino et al. comprising the inherent sliding rod as discussed for claim 6 above. As discussed above, for claim 1, the front compensation element (spring 17 in Fig. 5) is installed at the front end (the left end of the scanner shown in Fig. 5) of the inherent housing. The positional relation between the front compensation element and sliding rod is not clear since Sugino et al. does not show the (inherent) sliding rod. However, installing springs (26) as compensation elements (bumpers or shock absorbers) on (or around the end of) a sliding rods (8) on which a scan module containing a document scan head and a linear motor is slideably mounted within a housing (frame 12 in a facsimile apparatus), is taught by Thaler (Figs. 1-4, col. 2, line 56 – col. 4, line 51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to install the front compensation element (spring 17) of Sugino et al. on (or around the end of) the inherent sliding rod, as taught by Thaler, to restrict the force of the compensation element (spring 17) to be in the longitudinal direction of the sliding rod.

Regarding claim 11, Sugino et al. discussed for claim 1 does not disclose a rear compensation element installed at a rear end of the inherent scanner housing for providing a force to push the scanning module away from the rear section (right section of the housing or scanner shown in Fig. 5) as claimed.

Thaler discloses a rear compensation element (spring 26) installed at a rear end, in addition to a compensation element (spring 26) installed at a front end, of a housing (frame 12) within which a scanning module (in block 10, containing a document scan head 38) travels back and forth along guide rods (8) (Figs. 1-4, col. 2, line 56 – col. 4, line 51). The compensation elements (springs 26) functioning as bumpers or shock absorbers to cushion the impact of the block (10) containing scan head (38) against the ends of the housing (frame 12) (col. 4, lines 1-12), inherently provide forces to push the scanning module (in block 10) away from the rear section of the housing (12), such that when the motor (linear motor within the block 10 containing the scan head 38) drives the scanning module (in block 10) to move forward from the rear end of the housing (12), the rear compensation element (spring 26) provides the force to push the scanning module (in block 10) while the scanning module is in the rear section so as to reduce an acceleration time of the scanning module.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Thaler to install a rear compensation element (spring) at a rear end (the right end of the scanner in Fig. 5) of the inherent housing of Sugino et al. to provide a force to push the scanning module (1) away from the rear section (the right section in Fig. 5) of the inherent housing as claimed.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugino et al. (Japanese Application Publication No. 5-14614 (JP 05-014614 A)) in view of Chiang (U.S. Patent No. 6,330,084). As mentioned above, a machine translated English version of the publication is attached to the publication in Japanese language, which is attached to this Office Action.

Regarding claim 9, Sugino et al. discussed above for claim 1 has the motor (2) installed on the housing but not on the scanning module (1). However, having a motor installed in scanning module within the scanner housing is taught by Chiang (Figs. 2-5, col. 2, lines 25-56). Note the motor (38), scanning module (18) and scanner housing (12). Having the motor (38) installed on the scanning module (18) greatly simplifies the driving mechanism of the flatbed scanner (col. 1, lines 47-50).

Both the scanners of Chiang and Sugino et al. are flatbed type scanner. It would have been obvious to one of ordinary skill in the art at the time the invention was made to install the motor (2) of Sugino et al. on the scanning module (1) (Figs. 1 and 5) to greatly simplify the driving mechanism of the scanner as taught by Chiang.

Regarding claim 10, Sugino et al. does not disclose the type of the motor (2). However, employing a stepping motor to drive a scanning module in an original scanner is taught by Chiang (col. 3, lines 12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a stepping motor as the motor (2) of Sugino et al., as taught by Chiang, for the low cost and superior rotation accuracy of the stepping motor.

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8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugino et al. (Japanese Application Publication No. 5-14614 (JP 05-014614 A)). As mentioned above, a machine translated English version of the publication is attached to the publication in Japanese language, which is attached to this Office Action.

Regarding claim 12, Sugino et al. does not disclose the type of the motor (2). However, the examiner took Official Notice of the fact that servomotors (servo motor) employed in scanning devices are known because of the motor's low cost and superior rotation accuracy. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a servomotor as the motor (2) of Sugino et al. for its low cost and superior rotation accuracy as is known in the art.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Landsman (U.S. Patent No. 4,764,815), "Array scanning system with movable platen", Figs. 6-12, cols. 5-10

Gelbart (U.S. Patent No. 6,628,435), "Contact-less ballistic scanning method", Figs. 1 and 3b

Thaler (U.S. Patent No. 4,476,496), "Linear motor facsimile machine"

Arimori Iwao (Japanese Application Publication No. 04-144475 A), "Device for driving linear image sensor", Fig. 1, spring 21

Matsui (Japanese Application Publication No. 10-301214 A), "Image reader", Figs. 1-4

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (571) 272-7407. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee
January 21, 2006



Cheukfan Lee